

Date: Fri, 11 Jun 93 15:07:17 PDT  
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>  
Errors-To: Info-Hams-Errors@UCSD.Edu  
Reply-To: Info-Hams@UCSD.Edu  
Precedence: Bulk  
Subject: Info-Hams Digest V93 #716  
To: Info-Hams

Info-Hams Digest                      Fri, 11 Jun 93                      Volume 93 : Issue    716

Today's Topics:

40m in Europe, U.S. Buro questions  
AM Broadcast Radio Antenna (2 msgs)  
ft530 rubber resistor: tuned low?  
FTP File Compression Question  
Ham Radios in movies  
Intermodulation, dummy-load antennas and HT's  
mail order numbers  
Signal Strength Formula?  
Source for Test Equipment Manuals  
The ITU phonetic alphabet  
Utah Balloon Launch.  
Vertical Antenna Alternatives?  
WANTED FT-101ZD, Radios in movies

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>  
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

-----

Date: Fri, 11 Jun 1993 17:20:25 GMT  
From: usc!howland.reston.ans.net!usenet.ins.cwru.edu!magnus.acs.ohio-state.edu!  
cis.ohio-state.edu!udecc.engr.undayton.edu!blackbird.afit.af.mil!blackbird!  
jmillier@network.UCSD.EDU  
Subject: 40m in Europe, U.S. Buro questions  
To: info-hams@ucsd.edu

In article <C8BAJG.MqF@world.std.com> sharon@world.std.com (Sharon M Gartenberg)  
writes:

A couple of questions I hope someone might help with:

(deletia)

broadcast stations; in fact, in certain areas, U.S. hams are permitted additional operating frequencies on phone, if I remember correctly.

Not that it's particularly relevant to Europe, but \*real\* KH6's (unlike ersatz ones stuck on the mainland ;-) ) can operate phone from 7075-7100 kHz.

Like I said, not relevant, but I'm in a giddy mood after finals :-)

Jeff

--

Jeff Miller, NH6ZW/N8, AFA1HE (ex WD6CQV, AFA8JM, AFA1D0)  
AFIT School of Engineering, Wright-Patterson AFB, OH  
Welcome to Ohio: Our state flower is the orange highway construction barrel.  
Help eliminate FOD in our lifetime.

-----

Date: 11 Jun 93 14:21:06 CDT  
From: dog.ee.lbl.gov!overload.lbl.gov!agate!howland.reston.ans.net!  
ux1.cso.uiuc.edu!uwm.edu!linac!uchinews!raistlin!timbuk.cray.com!hemlock.cray.com!  
mahogany30!n3022@network.UCSD.EDU  
Subject: AM Broadcast Radio Antenna  
To: info-hams@ucsd.edu

Anyone have an idea on how to construct an  
AM broadcast radio antenna to pick up stations  
in an office building. I know the main problems  
are interference from flourescent lights and shielding  
from radio waves. Any and all suggestions are welcome.

Thanks,

Jim  
n3022@cray.com

-----

Date: Fri, 11 Jun 1993 21:14:25 GMT  
From: usc!sdd.hp.com!col.hp.com!news.dtc.hp.com!hpscit.sc.hp.com!  
cupnews0.cup.hp.com!jholly@network.UCSD.EDU

Subject: AM Broadcast Radio Antenna  
To: info-hams@ucsd.edu

Jim Knoll (n3022@cray.com) wrote:  
: in an office building. I know the main problems  
: are interference from flourescent lights and shielding  
: from radio waves. Any and all suggestions are welcome.

: Thanks,

: Jim  
: n3022@cray.com

Don't forget those pesky computers. Some of those unix and dos boxes  
can blast out some strong RF. Quitting those things down can be a chore.  
Jim, WA6SDM

-----  
Date: Fri, 11 Jun 1993 21:06:58 GMT  
From: world!surfer@uunet.uu.net  
Subject: ft530 rubber resistor: tuned low?  
To: info-hams@ucsd.edu

I personally HAD a weakness for the ANLI dual top duckiewhip.. its 2 and 1..  
Looks good.. Works GREAT.  
(what a shame i snapped the whip and my HT is DOA and thats all the hamgear  
I own)

--  
surfer@world.std.com | Its not impossible, just improbable  
jolt@gnu.ai.mit.edu | (Zaphod Beeblbrox) BTW im a ham... N1NIG

-----  
Date: Fri, 11 Jun 1993 19:41:20 GMT  
From: spsgate!mogate!newsgate!jeff@uunet.uu.net  
Subject: FTP File Compression Question  
To: info-hams@ucsd.edu

In article <01GZ8UVFIIYQ8WWDEB@IRIS.UNCG.EDU>, MOSIER@steffi.uncg.EDU (Steve  
Mosier) writes:  
|> When hunting around the internet for FTPable files, I encounter three types of  
|> compressed-file extensions: .zip, .arc, and .Z. I have unzip and dearc  
|> programs, but nothing to unZ. Can anyone give me an FTP route, and a file  
|> name, for a program to uncompress a <filename>.Z file?  
|>

```
|> steve - W3GRG
|> mosier@iris.uncg.edu          dit dit
|>
|>
```

The .Z extensions are files that have been compressed by the "compress" command in the unix OS. To uncompress you can use the command "uncompress", which deletes the original, or "zcat" which will leave the original compressed file intact. I'm not aware of any utilities for the PC or Mac world that uncompress .Z's but am interested if anyone out there has.

--

Jeff

Jeff Jorvig <rchm30@email.sps.mot.com> voice: (602) 814-4603  
Motorola Western MCU Design Center fax: (602) 814-4058  
\* - - - - - \*

-----  
Date: Fri, 11 Jun 93 12:59:02 GMT  
From: netcon!bongo!skyld!jangus@locus.ucla.edu  
Subject: Ham Radios in movies  
To: info-hams@ucsd.edu

In one of the 50's SF flick the Sheriff's station has an absolutely beautiful Motorola Cabinet and the DC Remote Console. (I forgot the name, but the plot has a guy from the future come back to stop a scientist from releasing a "thought control" helmet. Martin Rennee in silver boots I think....)

But for incorrect usage, my favorite was always "Magnetic Monster" where they are talking about the military's newest "state of the art" communications link and the picture in the background is a string of high tension towers.

J. Angus: jangus@skyld.tele.com -- "Als ik Kan", Gustav Stickley  
US Mail: PO Box 4425 Carson, CA 90749-4425 1 (310) 324-6080

-----  
Date: Fri, 11 Jun 1993 19:44:18 GMT  
From: usc!cs.utexas.edu!convex!horak@network.UCSD.EDU  
Subject: Intermodulation, dummy-load antennas and HT's  
To: info-hams@ucsd.edu

In <1vakek\$cgpb@pith.uoregon.edu> jeffh@ludwig.cc.uoregon.edu (Jeff Hite) writes:

>> I second the AEA Hotrod recommendation. I use the 2meter version on my

>> dual band DJ560T. If I want to use it on 440, I fully collapse it, then  
>> pull out the top two and 1/2 sections. Out in the desert mountains of  
>> SW Texas, I have hit repeaters over a hundred miles away on two watts!  
>>  
>> David N50FQ

>What kind of match do you get on 440? If it works well it looks like an  
>inexpensive alternative to the more expensive dual-bander antenna.  
>--  
>Jeff Hite      KF7SZ

I tried hooking an SWR meter between the whip and the radio (which may or may not be too accurate) and found the best match at that length (which was about 18 inches on 446, if I remember). I got an SWR of 1.3 on 146.52 and 4.0 on 446. In comparison, my rubber ducky load had an SWR of 1.9 and 6.0. I expected it to be higher but I suspect that having the meter at the base of the whips skewed the values a bit.

Also, I used a field strength meter at that length and got the best reading for 446 around 18". I was able to hit the local repeater quite good at that length. Much of this procedure is not foolproof and various readings can occur depending on surrounding objects and where you stand but I did it enough and with many other antennas that I am quite satisfied with my results, crude as they may be. Three of the telescoping antennas had the best match at 18" so I feel it is a good length for 440.

David

-----  
Date: 11 Jun 93 20:24:41 GMT  
From: netnews.upenn.edu!netnews.noc.drexel.edu!coe.drexel.edu!jpw@RUTGERS.EDU  
Subject: mail order numbers  
To: info-hams@ucsd.edu

Could someone please give me the phone numbers of reputable places (mail order, or whatever) where I could purchase a 2m handheld?

Thanks

--  
Joseph Wetstein      KA3VJY      PPL-SEL

-----  
Date: Fri, 11 Jun 1993 20:47:07 GMT

From: swrinde!sdd.hp.com!col.hp.com!news.dtc.hp.com!srngenprp!  
alanb@network.UCSD.EDU  
Subject: Signal Strength Formula?  
To: info-hams@ucsd.edu

Harold Peach (hgpeach@ms.uky.edu) wrote:  
: The basic question:

: What is the formula for computing the signal strength of  
: a transmission x feet/miles/kilometers from the antenna,  
: given the ERP of the transmitting station?

It depends on the receiving antenna. If you want an answer independent of the receiving antenna, then the result will be in terms of power density:

$$Pd = ERP / (4 \text{ Pi } r^2)$$

Where ERP (Effective Radiated Power) is power at the transmit antenna times gain over isotropic.  $r$  is the distance. If  $r$  is in meters, then the answer  $Pd$  will be watts per square meter.

To get the received signal strength, you multiply  $Pd$  times the aperture (capture area) of the receive antenna. The aperture, measured in square wavelengths, equals the gain divided by  $4 \text{ Pi}$ . In other words, the aperture of an isotropic antenna is  $1 / (4 \text{ Pi})$  square wavelengths.

To the total system loss (transmitter output power divided by receiver input power) is:

$$\begin{aligned} \text{System loss} &= (4 \text{ Pi } r^2) / [( \text{Receive ant Aperture} ) * ( \text{Transmit ant gain} )] \\ &= (4 \text{ Pi } r)^2 / [( \text{Rcv ant Gain} ) ( \text{Trns ant gain} ) ( \text{Wavelength} )^2] \\ &\quad \text{^^ note location of the } ^2 \end{aligned}$$

You can massage the above to get the more "practical" formula:

$$\text{System loss (dB)} = 32.44 \text{ dB} + 20 \log f + 20 \log d - G_r - G_t$$

where  $f$  is frequency in MHz,  $d$  is distance in kilometers, and  $G_r$  and  $G_t$  are receive and transmit antenna gain over isotropic in dB.

Note: The above formulas make it look like longer wavelengths (lower frequencies) have less path loss. However high-gain antennas are smaller at higher frequencies. So if you use antennas of the same SIZE, higher frequencies are better. If you use antennas of the same GAIN, then lower frequencies are better.

: Now given this basic formula, how would it differ for a satellite

: transmission where the signal must pass through the atmosphere?

You add atmospheric attenuation to the above free-space formula. The additional path loss depends on the frequency in use and the elevation angle of the antenna. (Vertical 90 degree elevation has the least loss since the signal goes through less atmosphere.)

Below 10 GHz or so, in the absence of rain, atmospheric attenuation is negligible for a satellite link. There is an attenuation peak around 23 GHz of about .65 dB (90 degree elevation), or 1.3 dB (30 deg).

AL N1AL

-----

Date: 11 Jun 1993 20:44:52 GMT  
From: pa.dec.com!n1bwt.enet.dec.com!wade@decwrl.dec.com  
Subject: Source for Test Equipment Manuals  
To: info-hams@ucsd.edu

I recently found a source for test equipment manuals at a fair price, for those of us who find old treasures at fleas:

Ed Matsuda  
Test Equipment Manuals  
PO Box 390613  
San Diego, CA 92149  
619-479-0225  
FAX 619-479-1670

My one order to date had rapid response.  
Thanks to Ed Walker, WA4DFS, for finding this guy.

paul N1BWT

-----

Date: 11 Jun 1993 19:21:26 GMT  
From: usc!howland.reston.ans.net!noc.near.net!jericho.mc.com!fugu!  
levine@network.UCSD.EDU  
Subject: The ITU phonetic alphabet  
To: info-hams@ucsd.edu

In article 1389@rsg1.er.usgs.gov, tbodoh@resdgs1.er.usgs.gov (Tom Bodoh) writes:  
> In article <jfhC8F7qn.G9H@netcom.com>, jfh@netcom.com (Jack F. Hamilton) writes:  
> |> tbodoh@resdgs1.er.usgs.gov (Tom Bodoh) wrote:  
> |>  
> |> >I frequently have to use phonetics when asking for tapes to be sent up from

```

> |> >our tape library - and I like to use 'psuedo' for 'p'. That usually
> |> >confuses the hell out of them - but I always get the right tape.
> |>
> |> "I'd like tape PKM, please - that's Pseudo Knowledge Mnemonic."
> |>
> |> --
> |>
> |> -----
> |> Jack Hamilton      jfh@netcom.com      kd6ttl@n0ary.#nocal.ca.us.na (AMPR)
> |> Post Office Box Box 281107      San Francisco, California 94128 USA
>
> --
> I like it - here's the ones I have so far, fill in the blanks;
>
> a-->Aesop
> b
> c
> d
> e
> f
> g      gnaw
> h
> i
> j      juan
> k      knowledge
> l
> m      mnemonic
> n
> o
> p      pseudo
> q-->quay (pronounced key)
> r
> s
> t-->Tchaikovsky
> u
> v
> w
> x      xylophone
> y
> z
>
> ++++++
> + Tom Bodoh - Sr. systems software engineer
> +
> + USGS/EROS Data Center, Sioux Falls, SD, USA      57198      (605) 594-6830      +
> + Internet; bodoh@dgg.cr.usgs.gov (152.61.192.66)
> +
> + "Welcome back my friends to the show that never ends!" EL&P

```



+  
> ++++++

-----

Date: Fri, 11 Jun 93 19:45:24 GMT  
From: orca!bambam!alan@uunet.uu.net  
Subject: Utah Balloon Launch.  
To: info-hams@ucsd.edu

The Dixie Amateur Radio Club (DARC) of St. George, Utah (southwestern Utah) will be launching a helium filled weather balloon on Saturday, June 19, 1993, at 0700 MDT (1300Z, June 19). The balloon will be carrying a 2 meter repeater and a 2 meter beacon. All amateurs are invited to attempt QSOs through the repeater and to track the balloon using the beacon. A net will be set up on 3935 KHz on 75 meters to field reports on the progress of the balloon. Certificates will be available and I will obtain further information on those if anyone is interested. The balloon frequencies are:

Repeater - input 147.15 MHz  
          output 146.55 MHz (yes, this is normally a simplex frequency).

Beacon - 145.55 MHz.

The usual prevailing winds should cause the balloon to travel in a northeasterly direction carrying it over east-central Utah and west-central Colorado. The DARC will be interested in receiving any and all reception reports or reports of QSOs made through the repeater. Good luck.

--  
Alan Brubaker, K6X0 |~~|\_ "Pumps have handles, Hams have names;  
<IYF disclaimer> | \* |mine's Lee, what's yours?" - Lee Wical,  
Internet: alan@dtd.es.com|\_\_\_\_|KH6BZF, the Bloomin' Zipper Flipper.

-----

Date: 11 Jun 1993 19:53:08 GMT  
From: swrinde!gatech!usenet.ins.cwru.edu!magnus.acs.ohio-state.edu!  
lfeth@network.UCSD.EDU  
Subject: Vertical Antenna Alternatives?  
To: info-hams@ucsd.edu

I have decided to investigate a multiband vertical antenna at home due to both space limitations and to keep peace in the neighborhood (deed restrictions). I have seen the ads and even read several reviews, but I would like to have some

input from either satisfied or dissatisfied customers on the question of which Vertical? The GAP verticals look interesting, are they as good as they claim? Should I fall back on "old reliable" trap verticals for multi-band use?

Answers here or via e-mail to feth@shs.ohio-state.edu will be appreciated

Thanks Larry Feth N8WKV

-----  
Date: Fri, 11 Jun 1993 17:24:51 GMT  
From: swrinde!gatech!usenet.ins.cwru.edu!magnus.acs.ohio-state.edu!cis.ohio-state.edu!udecc.engr.udayton.edu!blackbird.afit.af.mil!blackbird!jmiller@network.UCSD.EDU  
Subject: WANTED FT-101ZD, Radios in movies  
To: info-hams@ucsd.edu

In article <2C138DFE.25376@ics.uci.edu>, turner@safety.ics.uci.edu (Clark Savage Turner) writes:

|> The Anderson Tapes - saw the kid use an HW-101 to get help.  
|> The Godzilla movies (forget which one) - saw a Yaesu FTdx 560 used as  
|> part of a "death ray" weapon.  
|> Buckaroo Banzai - this little kid keeps in touch with Buckaroo with a  
Kenwood  
|> TS-520.  
|> I don't often see movies, so I suppose the list goes on and on. Anyone  
|> want to add to it?

On a particularly long overseas flight long ago, I saw a B movie called "High Frequency".  
Don't recall the details, but a key element of the plot was the ability of some kid in  
(?) California to talk with some ham in Switzerland...they seemed to like to use  
2.6??? MHz,  
though :-)

73, Jeff

--  
Jeff Miller, NH6ZW/N8, AFA1HE (ex WD6CQV, AFA8JM, AFA1D0)  
AFIT School of Engineering, Wright-Patterson AFB, OH  
Welcome to Ohio: Our state flower is the orange highway construction barrel.  
Help eliminate FOD in our lifetime.

-----  
Date: Fri, 11 Jun 1993 18:10:54 +0000  
From: swrinde!cs.utexas.edu!math.ohio-state.edu!howland.reston.ans.net!  
newsserver.jvnc.net!gmd.de!Germany.EU.net!mcsun!uknet!strath-cs!bnr.co.uk!demon!  
llondel.demon.co.uk!dave@network.UCSD.EDU  
To: info-hams@ucsd.edu

References <1v04a1INNh3f@emx.cc.utexas.edu>, <1v0s7t\$1pb@charm.magnus.acs.ohio-  
state.edu>, <1993Jun09.193854.14470@microsoft.com>.E  
Reply-To : dave@llondel.demon.co.uk  
Subject : Re: ham radios in movies

In article <4061@eram.esi.COM.AU> dave@esi.COM.AU (Dave Horsfall) writes:

> In article <1993Jun09.193854.14470@microsoft.com>,  
> davidar@microsoft.com (David Arnold) writes:  
>  
> | It was funny when they were using the radios deep down in those caves.  
>  
> I've used radios (2m and 70cm) deep down in caves, with little problem.  
>

Presumably the cave acts like a large waveguide? Does 2M work if you have to  
wriggle through a small opening (i.e. less than 1/2 wavelength in any  
dimension)?

Dave

\*\*\*\*\*  
\* G4WRW @ GB7WRW.#41.GBR.EU AX25 \* You think \*you\* have problems? \*  
\* dave@llondel.demon.co.uk Internet \* What do you do if you \*are\* \*  
\* g4wrw@g4wrw.ampr.org Amprnet \* a manically depressed robot?? \*  
\*\*\*\*\*

-----  
Date: Fri, 11 Jun 93 11:50:53 GMT  
From: usc!howland.reston.ans.net!usenet.ins.cwru.edu!magnus.acs.ohio-state.edu!  
cis.ohio-state.edu!mstar!n8emr!gws@network.UCSD.EDU  
To: info-hams@ucsd.edu

References <C8BxyK.Jt2@feenix.metronet.com>,  
<1993Jun09.230737.3530@n8emr.cmhnet.org>, <jfhC8F0vC.EqD@netcom.com>ta  
Subject : Re: Callbook server

In article <jfhC8F0vC.EqD@netcom.com> jfh@netcom.com (Jack F. Hamilton) writes:  
>gws@n8emr.cmhnet.org (Gary Sanders) wrote:  
>>In article <C8BxyK.Jt2@feenix.metronet.com> marcdbg@feenix.metronet.com (Marc  
Grant) writes:

>>>  
>>The folks at buffalo.edu, myself and several others have all offered  
>>callsign lookups via various direct and indirect methods on the internet.  
>>Might I have your mailing address? Ill drop you an invoice for your  
>>share of the fees to get the latest database. Depending on how you  
>>get the database its going to cost the supporting group \$100 and up  
>>for a twice yearly updated callbook.

>

>The CD's cost what, about \$25-\$30?

What CD??? Buckmaster wants \$110 a year for there CDroms. The new  
walnut CD may only be \$25 but will any future callsigns updates be  
available? If so how often? Also what about the cost of a CDRom drive.  
You have now forced the provider to purchase a CDRom drive for the  
callsign database. Depending on the computer doing the serving a  
flexability of the OS the CDRom drive is going to cost \$500 to \$2000.  
Also can a CDRom drive even be supported on the callsign machine?

In general CDRom's are a great for personal machine but are  
lousy for general retrieval of information. Most CDRom drivers only  
support a single drive. I know I dont want to tie up my CDRom drive  
for a specific application. I move the data off to magnetic media  
if I really want to make use of it.

--

Gary W. Sanders gws@n8emr.cmhnet.org, 72277,1325  
N8EMR @ N8JYV (ip addr) 44.70.0.1 [Ohio AMPR address coordinator]  
HAM BBS 614-895-2553 (1200/2400/V.32/PEP) Voice: 614-895-2552 (eves/weekends)

-----

Date: Fri, 11 Jun 1993 21:22:53 GMT  
From: usc!howland.reston.ans.net!agate!news.ucdavis.edu!othello.ucdavis.edu!  
ez006683@network.UCSD.EDU  
To: info-hams@ucsd.edu

References <1993Jun8.234634.29588@random.ccs.northeastern.edu>,  
<1993Jun9.134142.586@rsg1.er.usgs.gov>,  
<1993Jun9.211159.22522@random.ccs.northeastern.edu>  
Subject : Re: ICOM IC-2SRA Mods...

A DJ-580 that xmits from 29mhz to 900mhz!!! Wow! please post I have  
friend with a 580 and I'd love to try the mod on HIS radio :-)  
does it xmit AM too? I've heard of an aviation xmit mod but no one seems to  
know how to do it.

dan

--

```

*-----*
* Daniel D. Todd      Packet: KC6UUD@WA6RDH.#nocal.ca.usa      *
*                      Internet: DDTODD@ucdavis.edu              *
*                      Snail Mail: 1750 Hanover #102             *
*                      Davis CA 95616                           *
*-----*
*      I do not speak for the University of California....      *
*      and it sure as hell doesn't speak for me!!              *
*-----*

```

-----

Date: Fri, 11 Jun 1993 21:08:14 GMT  
 From: usc!howland.reston.ans.net!agate!news.ucdavis.edu!othello.ucdavis.edu!  
 ez006683@network.UCSD.EDU  
 To: info-hams@ucsd.edu

References <1v0s7t\$1pb@charm.magnus.acs.ohio-state.edu>,  
 <1993Jun09.193854.14470@microsoft.com>, <4061@eram.esi.COM.AU>  
 Subject : Re: ham radios in movies

Dave Horsfall (dave@esi.COM.AU) wrote:  
 : In article <1993Jun09.193854.14470@microsoft.com>,  
 : davidar@microsoft.com (David Arnold) writes:

: | It was funny when they were using the radios deep down in those caves.

: I've used radios (2m and 70cm) deep down in caves, with little problem.  
 Did anyone hear you while you were using your HT dep in the cave? :-)

Dan

--

```

*-----*
* Daniel D. Todd      Packet: KC6UUD@WA6RDH.#nocal.ca.usa      *
*                      Internet: DDTODD@ucdavis.edu              *
*                      Snail Mail: 1750 Hanover #102             *
*                      Davis CA 95616                           *
*-----*
*      I do not speak for the University of California....      *
*      and it sure as hell doesn't speak for me!!              *
*-----*

```

-----

End of Info-Hams Digest V93 #716

\*\*\*\*\*